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REMARKS

In the Office Action dated August 2, 2006, claims 1-2, 4-10, and 12-24 are pending. Claims 17-20 stand allowed. Claims 1-2, 4-9, and 21-22 stand allowable should the 35 U.S.C. 112 rejection be overcome. Claims 23 and 24 stand allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. Claims 10 and 12-16 stand rejected. Of claims 10 and 12-16, claim 10 is an independent claim from which claims 12-16 depend therefrom. Claims 1, 10, and 13 are herein amended

Rejection of claims 1-2, 4-9, and 21-22 under 35 U.S.C. 112

Claims 1-2, 4-9, and 21-22 stand rejected under 35 U.S.C. 112. The Office Action states that the specification lacks support for the limitation of "a pressure that is less than the standard atmospheric pressure (1 atm)." Paragraph [0026] of the specification states that the low-pressure cavity 58 may be either a vacuum or filled with a low-pressured gas. The term "vacuum" refers to any pressure less than atmospheric pressure. This definition is known in industry and to one skilled in the art. As such, this limitation is clearly supported by the specification. Nevertheless, claim 1 is herein amended to recite "a vacuum cavity." Although claim 1 is herein amended, the meaning and the scope of the claim has not changed.

Since the specification clearly supports the limitation of "a vacuum cavity", the 35 U.S.C. 112 rejection is now overcome and claims 1-2, 4-9, and 21-22 are now in allowable form.

Rejection of claims 10 and 13-16 under 35 U.S.C. 103(a)

Claims 10 and 13-16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bernacki (U.S. 4,119,855) in view of Meyer et al. (U.S. 6,002,202) and Yamaguchi (U.S. Pat. No. JP 54-151384).

In the Response of May 30, 2006, Applicants argued that Bernacki, Meyer, and Yamaguchi failed to teach or suggest alone or in combination the limitations of a sealed electron beam source that separates a source interior from a low-pressure cavity and an electron beam source that is external, separate, and sealed from a

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rotating target that is located within the low-pressure cavity. Applicants submit that these arguments are valid and as such remain.

It appears from the Response to Arguments section of the current Office Action that the Examiner is misinterpreting the Bernacki reference. The Office Action states that the enclosure 64 of Bernacki is a low-pressure cavity and the Office Action relies solely on Bernacki for this disclosure. It states in Bernacki in col. 3, lines 6-11 that the enclosure 64 is open-ended and is at atmospheric pressure. Atmospheric pressure is clearly not a low-pressure. Nevertheless, claim 10 is herein amended to recite a vacuum cavity instead of a low-pressure cavity. Again, note that although claim 10 is herein amended that the meaning and scope of the claim has not changed, since the term "vacuum" refers to a low-pressure or any pressure less than atmospheric pressure. Bernacki clearly fails to disclose a source interior that is separated from a vacuum cavity.

Applicants have also asserted that Meyers discloses a window that stands off atmospheric pressure. See the Abstract of Meyers.

Applicants have further asserted that Yamaguchi fails to teach or suggest the above stated limitations, especially since the source 12 is not separated from the target 17.

Thus, Bernacki, Meyers, and Yamaguchi fail to teach or suggest each and every element of claim 10. Thus, claim 10 is novel, nonobvious, and is in a condition for allowance. Since claims 13-16 depend from claim 10, they are also novel, nonobvious, and are in a condition for allowance for at least the same reasons.

Rejection of claim 12 under 35 U.S.C. 103(a)

Claim 12 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Bernacki, Meyer, Yamaguchi, and Barrett (U.S. Pat. No. 6,674,838).

Since claim 12 depends from claim 10 it is also novel, nonobvious, and is in a condition for allowance for at least the same reasons.

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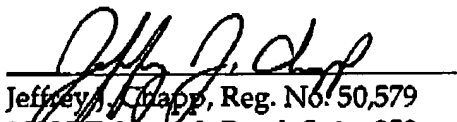
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In light of the amendments and remarks, Applicants submit that all of the objections and rejections are now overcome. The Applicants have added no new matter to the application by these amendments. The application is now in condition for allowance and expeditious notice thereof is earnestly solicited. Should the Examiner have any questions or comments, the Examiner is respectfully requested to contact the undersigned attorney.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to Deposit Account 07-0845

Respectfully submitted,

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